

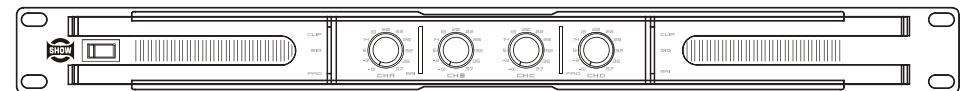


THE UNIVERSE OF INSTALLATION

# SWITCHING POWER PROFESSIONAL AMPLIFIER

## User's Manual

A300.4/A500.4



SHOW® is a registered trademark of  
SEIKAKU TECHNICAL GROUP LIMITED

**SEIKAKU TECHNICAL GROUP LIMITED**

NO.1 LANE 17, SEC.2, HAN SHI WEST ROAD, TAICHUNG 40151, TAIWAN

tel: 886-4-22313737 - fax: 886-4-22346757

## Important Safety Instructions



This symbol, wherever used, alerts you to the presence of un-insulated and dangerous voltages within the product enclosure. These are voltages that may be sufficient to constitute the risk of electric shock or death.



This symbol, wherever used, alerts you to important operating and maintenance instructions.

### POWER SUPPLY

Ensure that the insource voltage (AC outlet) matches the voltage rating of the product. Failure to do so could result in damage to the product and possibly the user. Unplug the product before electrical storms occur and when unused for long periods of time to reduce the risk of electric shock or fire.

### EXTERNAL CONNECTION

Always use proper ready-made insulated mains cabling (power cord). Failure to do so could result in shock/death or fire. If in doubt, seek advice from a registered electrician.

### DO NOT REMOVE ANY COVERS

Within the product are areas where high voltages may present. To reduce the risk of electric shock do not remove any covers unless the AC mains power cord is removed. Covers should be removed by qualified service personnel only. No user serviceable parts inside.

### FUSE

To prevent fire and damage to the product, use only the recommended fuse type as indicated in this manual. Do not short-circuit the fuse holder. Before replacing the fuse, make sure that the product is OFF and disconnected from the AC outlet.

### PROTECTIVE GROUND

Before turning the unit on, make sure that it is connected to Ground. This is to prevent the risk of electric shock. Never cut internal or external Ground wires. Like wise, never remove Ground wiring from the Protective Ground Terminal.

### OPERATING SAFETY INSTRUCTIONS

Read these instructions. Follow all instructions. Keep these instructions. Do not discard. Heed all warnings. Only use attachments/accessories specified by the manufacturer.

### POWER CORD AND PLUG

Do not tamper with the power cord or plug. These are designed for your safety. Do not remove Ground connections! If the plug does not fit your AC outlet seek advice from a qualified electrician. Protect the power cord and plug from any physical stress to avoid risk of electric shock. Do not place heavy objects on the power cord. This could cause electric shock or fire.

### SERVICING

Refer all servicing to qualified service personnel only. Do not perform any servicing then those instructions contained within this User's Manual.

### DISPOSAL



This symbol indicates that the disposal of this product is submitted to local regulations. Please contact your local dealer.

## 6

## Warranty

This device is warranted parts and labor against any manufacturing defects for a period of two years from the date of purchase by the first user.

### Conditions

1. The unit has been installed and implemented by observing the safety instructions in this operating manual.
2. The device was not diverted from its destination, either voluntary or accidental, and suffered no deterioration or modification other than those described here or explicitly authorized by SHOW.
3. All modifications or repairs have been carried out by an authorized service station.
4. The defective product must be returned with the dealer who made the sale or to an authorized service station with proof of purchase.
5. The device was properly packaged to avoid damage in transport.

# 5

## Technical Specifications

Power Specifications(tolerance +/-5%)		A300.4	A500.4
CHA/B (One Channel drive)	4 Ω (RMS)	300W	600W
CHA & CHB CHC & CHD (All Channel drive)	2 Ω (EIAJ)	600W x4	1200W x4
	4 Ω (RMS)	270W x4	450W x4
CHA & CHB CHC & CHD (Bridge Mono mode)	4 Ω (EIAJ)	1200W x2	2400W x2
	8 Ω (RMS)	540W x2	900W x2
THD		< 0,1%	
Frequency Response	CHA-CHD	20 Hz - 20k Hz +0/-1 dB	
Frequency Response (SUB Mode)	CHA & CHB	(50 Hz – 250 Hz) – 20 kHz +0/-3 dB	
	SUB	20 Hz – (50Hz – 250 Hz) +0/-3 dB	
S/N rate		> 96 dB	
Gain (V)		30± 0,5 dB	33 ± 0,5 dB
Input Sensitivity		0,9-1,1 V (0+/-1 dBv)	
Input Impedance		20 kΩ balanced or 10 kΩ unbalanced	
Controls		Front panel:On/Off Power Switch,volum channel A,B& SUB Real pael:SUB,CHA+CHB selector: Cut off frequency selectors Modes select	
Indicators		POWER ON : Green Led      Bridged:Red LED SIGN : Green Led      Prior:Green /Red LED PROT : Red Led CLIP : Red Led	
Connectors		Inputs: Euroblock Outputs: Euroblock	
Load Protection		On/Off Mute, DC fault grounding relay, internal fault fuses	
Power Supply		110 - 120 V or 220 - 240 V 50 ~ 60 Hz	
Dimensions (L x D x H)		483 x 360 x 44 mm	
Net Weight		6.2 kg	6.3 kg

## Index

1. Introduction .....	4
2. Main Features .....	4
3. Functions .....	5
4. Applications .....	8
5. Technical Specifications .....	10
6. Warranty .....	11

# 1 Introduction

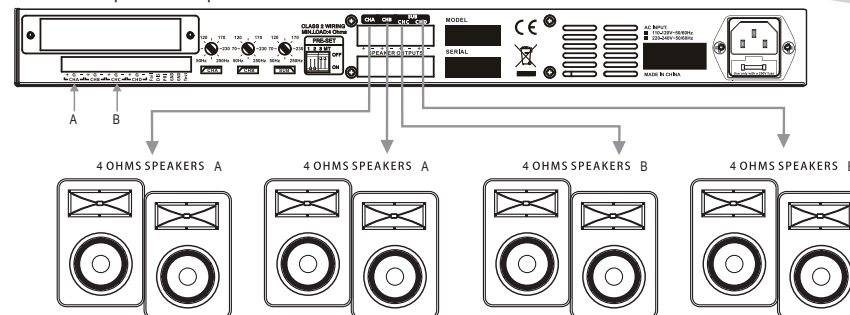
Thanks for the acquisition of the A300.4/A500.4 SHOW. This four channels power amplifier has been developed to drive two satellites and one subwoofer in fixed installations requiring limited space in the bays.

The A300.4/A500.4 has a high efficiency thanks to his Class-D technology and can deliver 4 x 150 W RMS/4 Ohms or 2 x 150 W RMS/4 Ohms + 300 W RMS/8 Ohms(Bridged).

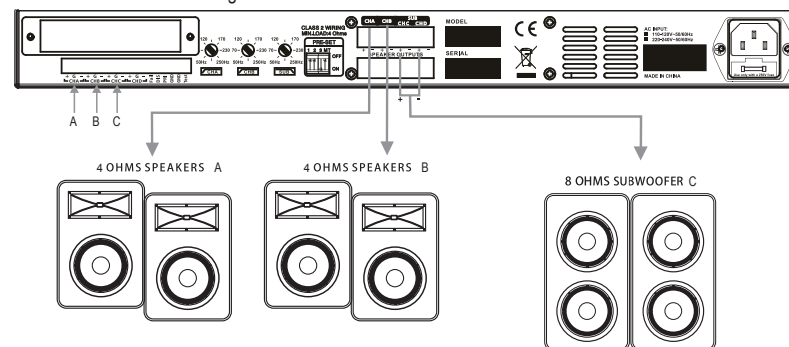
# 2 Main Features

- High current switching power allowing high power output with low noise and low distortion
- Substantial protection circuitry like thermal, short circuit, power on/off muting and Therefore protection
- Built-in limiter
- Euroblock input and output
- front mounted gain controls for easy access
- Signal, Clip protect, and Power LED indicators to monitor performance.
- Stereo/Parallel/Bridged/Mute/Select operation Mode
- Amplifier Disable/Prior/Failure Status

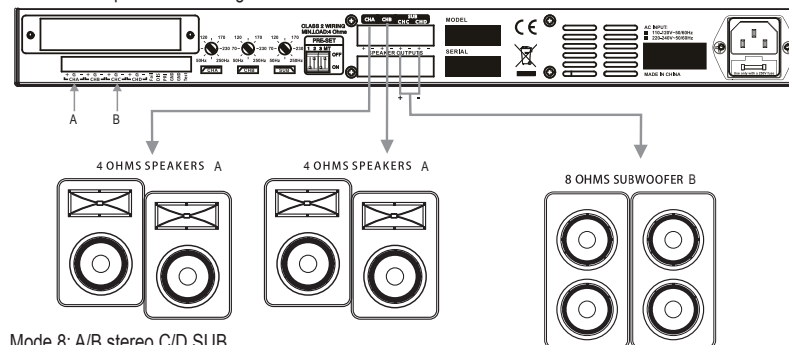
Mode 4: A/B parallel C/D parallel



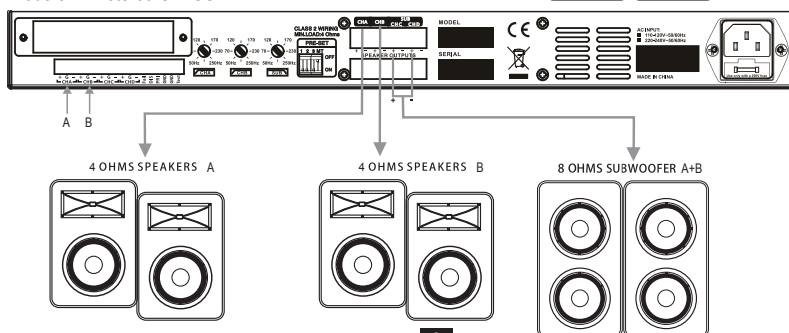
Mode 5: A/B stereo C/D bridged



Mode 6: A/B parallel C/D bridged



Mode 8: A/B stereo C/D SUB



# 4 Applications

## Inputs connections

The inputs can be connected to the Euroblock socket using the female free part connectors supplied with the device.

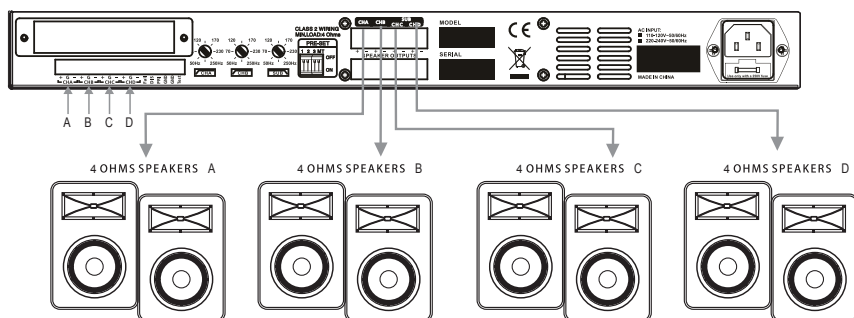
For balanced inputs use Hot pin (+), Cold pin (-) and Ground pin (G) terminals.

For unbalanced inputs use Hot pin (+) and Ground pin (G) only.

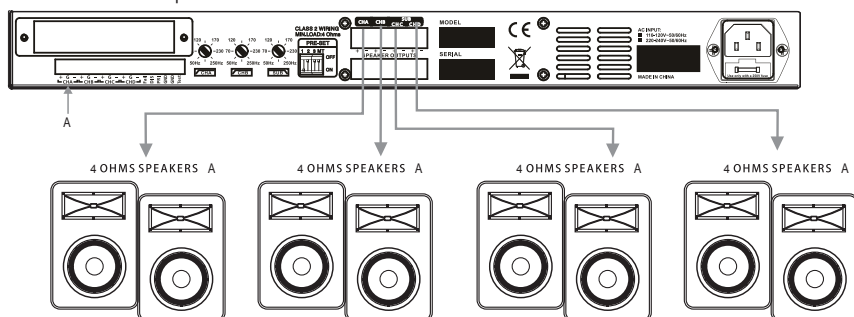
## Speaker connections

Check that the polarity is well respected for every speaker. Two Euroblocks connected point to point are available for easy parallel set up. The impedance output must not be higher than 2 Ohms per channel.

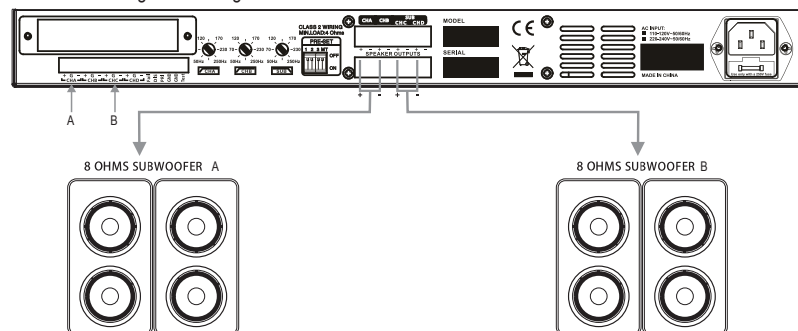
Mode 1: All channels stereo



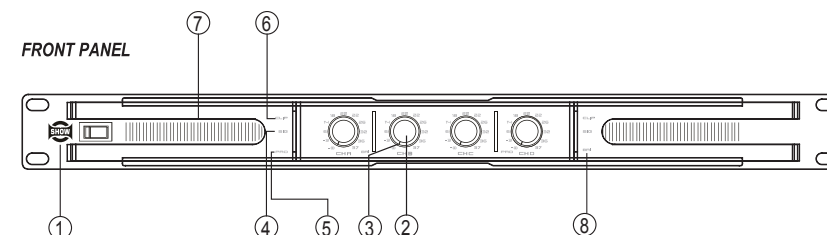
Mode 2: All channels parallel



Mode 3: A/B bridged C/D bridged



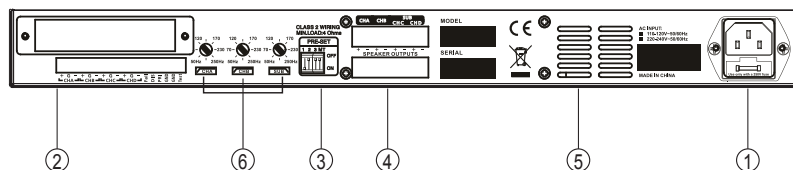
# 3 Functions



- ① **Power Switch**  
It switches ON/OFF the unit main power.
- ② **Level Control**  
These volume controls allow you to adjust the volume level.
- ③ **Power/Prior LED**  
The Green LED light up when the amplifier is powered ON. The Red LED light up when the amplifier is input priority.
- ④ **Signal LED**  
These green LED light up when the respective channel's output signal pass through.
- ⑤ **Protection LED**  
In normal operation, the LED will not illuminate. If the LED is red, it means the unit is in heat protection, no sound is output. The speaker system is actually disconnected from the amplifier outputs when this LED is red, the temperature must be lowered by better ventilation and decrease the signal level etc. If the problem is corrected, the protection systems deactivate automatically, and normal amplifier operation is resumed.
- ⑥ **Clip LED**  
This red LED lights up when the input signal is too strong. It is time to reduce input level until clip LED turns off.
- ⑦ **Air Intake Vents**  
A300.4/A500.4 employ a variable speed internal cooling fan to intake the air through front grill to keep it running cool even under extreme operating conditions. Please keep these vents clear and free from obstruction at all times to insure proper cooling.
- ⑧ **Bridged LED**  
The Bridged LED light up when the amplifier is Bridged Mode.

# 3 Functions

Back Panel



## ① AC Input

Use it to connect your A150.2/A300.2/A500.2 to the supplied AC cord.

## ② Euroblock input

CHA +:CHA balanced signal input+ or unbalanced signal input

CHA G:CHA signal GND

CHA - :CHA balanced signal input- or unbalanced signal not connect

CHB ,CHC and CHD are the same.

Fail:Failure Status output

Failure Status with +5V high level;

disabled/protection/inactive are all with output low level.

DIS: Amplifier disabled ,input control PIN

While operating the disabled function of amplifier with +5V high level,linked to GND.the amplifier will shutdown with all protection LEDS lighting. at this moment the status will be changed from +5V high level (normal status) to Low level (amplifier disabled or unconnected.using the disabled function of the amplifier and then connect to speaker output ,finally the amplifier will start again after sucessful connection.

PRI: Input Priority Control PIN

When PRI connect to GND directly , TEST input has priority , at this moment VR RED LEDS lighting.

GND: signal GND and control GND.

TEST: Input Priority test/alarm signal

When PRI connect to GND directly, Test/alarm signal is the top priority level.

## ③ Mode select

Mode 1: All channels stereo

All input and output channels are independent.

Mode 2: All channels parallel

All outputs are the same with any channel input.

Mode 3: A/B bridged C/D bridged

Input the signal to channel A, connect the speaker's "+" to the output A+, connect speaker's '-' to the output B+. Then you get a 300W(8Ω) power. CH C and CH D are the same.

Mode 4: A/B parallel C/D parallel

CHA output and CHB output are the same whether input from CH A or CH B. The CH C and CH D are the same.

Mode 5: A/B stereo C/D bridged

CH A's input and outputs are independent from CH B. CH C and CH D are bridged.

Mode 6: A/B parallel C/D bridged

CH A and CH B are parallel. CHC and CH D are bridged.

Mode 7: A/B stereo C/D SUB

CH A and CH B are stereo. CH C and CH D are bridged. SUB output signal is low frequency from CHC input. X-OVER FREQ is available.

Mode 8: A/B stereo C/D SUB

CH A and CH B are stereo. CH C and CH D are bridged and the device filters and amplifies signal A+B to feed the Subwoofer with the low frequencies only. X-OVER FREQ is available.

Mode 9: Amplifier Mute

Amplifier is Mute.

\* X-OVER FREQ is available in Mode 7 and Mode 8 only.

	Preset				Operation Mode
	1	2	3	MT	
1	OFF	OFF	OFF	OFF	CHA/CHB/CHC/CHD ALL STEREO
2	ON	OFF	OFF	OFF	CHA/CHB/CHC/CHD ALL PARALLEL
3	OFF	ON	OFF	OFF	CHA/CHB BRIDGED ,CHC/CHD/ BRIDGED
4	ON	ON	OFF	OFF	CHA/CHB PARALLEL,CHC/CHD/ PARALLEL
5	OFF	OFF	ON	OFF	CHA/CHB STEREO,CHC/CHD BRIDGED(FULL RANGE)
6	ON	OFF	ON	OFF	CHA/CHB PARALLEL, CHC/CHD BRIDGED(FULL RANGE)
7	OFF	ON	ON	OFF	CHA/CHB STEREO, SUB(CHC/CHD BRIDGED,INPUT=CHC)
8	ON	ON	ON	OFF	CHA/CHB STEREO, SUB(CHC/CHD BRIDGED,INPUT=CHA+CHB)
9				ON	AMPLIFIER MUTE

## ④ Speakers connectors

Euroblock speakers output.The up and down outputs are connected together.

## ⑤ Vent grille

This fan has three level speed. The fan will speed up when the temperature of the amplifie rise up.

When you set the amplifie in mute mode, the fan run fastest. Check that the vent grille is not obstructed.

## ⑥ X-OVER FREQ

Cut off frequency selectors for hi-pass (CH A, CH B) and low-pass (SUB) filters. The value can be set from 50 Hz to 250 Hz.